



2
ENTERED

OIPF

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/075,907

DATE: 03/04/2002
TIME: 14:51:05

#2

Input Set : A:\7039s1.txt
Output Set: N:\CRF3\03042002\J075907.raw

4 <110> APPLICANT: Genencor International, Inc.
5 Davis, Benjamin G.
6 Jones, Bryan J.
7 Bott, Richard R.
9 <120> TITLE OF INVENTION: CHEMICALLY MODIFIED ENZYMES WITH
10 MULTIPLE CHARGED VARIANTS
12 <130> FILE REFERENCE: 23623-7039
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/075,907
C--> 15 <141> CURRENT FILING DATE: 2002-02-12
17 <150> PRIOR APPLICATION NUMBER: US 60/113,130
18 <151> PRIOR FILING DATE: 1998-12-21
20 <160> NUMBER OF SEQ ID NOS: 2
22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 269
26 <212> TYPE: PRT
27 <213> ORGANISM: Bacillus lentus
29 <220> FEATURE:
30 <223> OTHER INFORMATION: Subtilisin SBL
32 <400> SEQUENCE: 1
33 Ala Gln Ser Val Pro Trp Gly Ile Ser Arg Val Gln Ala Pro Ala Ala
34 1 5 10 15
35 His Asn Arg Gly Leu Thr Gly Ser Gly Val Lys Val Ala Val Leu Asp
36 20 25 30
37 Thr Gly Ile Ser Thr His Pro Asp Leu Asn Ile Arg Gly Gly Ala Ser
38 35 40 45
39 Phe Val Pro Gly Glu Pro Ser Thr Gln Asp Gly Asn Gly His Gly Thr
40 50 55 60
41 His Val Ala Gly Thr Ile Ala Ala Leu Asn Asn Ser Ile Gly Val Leu
42 65 70 75 80
43 Gly Val Ala Pro Ser Ala Glu Leu Tyr Ala Val Lys Val Leu Gly Ala
44 85 90 95
45 Ser Gly Ser Gly Ser Val Ser Ser Ile Ala Gln Gly Leu Glu Trp Ala
46 100 105 110
47 Gly Asn Asn Gly Met His Val Ala Asn Leu Ser Leu Gly Ser Pro Ser
48 115 120 125
49 Pro Ser Ala Thr Leu Glu Gln Ala Val Asn Ser Ala Thr Ser Arg Gly
50 130 135 140
51 Val Leu Val Val Ala Ala Ser Gly Asn Ser Gly Ala Gly Ser Ile Ser
52 145 150 155 160
53 Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Val Gly Ala Thr Asp Gln
54 165 170 175
55 Asn Asn Asn Arg Ala Ser Phe Ser Gln Tyr Gly Ala Gly Leu Asp Ile

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56          180          185          190
57 Val Ala Pro Gly Val Asn Val Gln Ser Thr Tyr Pro Gly Ser Thr Tyr
58          195          200          205
59 Ala Ser Leu Asn Gly Thr Ser Met Ala Thr Pro His Val Ala Gly Ala
60          210          215          220
61 Ala Ala Leu Val Lys Gln Lys Asn Pro Ser Trp Ser Asn Val Gln Ile
62 225          230          235          240
63 Arg Asn His Leu Lys Asn Thr Ala Thr Ser Leu Gly Ser Thr Asn Leu
64          245          250          255
65 Tyr Gly Ser Gly Leu Val Asn Ala Glu Ala Ala Thr Arg
66          260          265
67 <210> SEQ ID NO: 2
68 <211> LENGTH: 275
69 <212> TYPE: PRT
70 <213> ORGANISM: Bacillus amyloliquefaciens
71 <220> FEATURE:
72 <223> OTHER INFORMATION: Subtilisin BPN'
73 <400> SEQUENCE: 2
74 Ala Gln Ser Val Pro Tyr Gly Val Ser Gln Ile Lys Ala Pro Ala Leu
75 1          5          10          15
76 His Ser Gln Gly Tyr Thr Gly Ser Asn Val Lys Val Ala Val Ile Asp
77 20          25          30
78 Ser Gly Ile Asp Ser Ser His Pro Asp Leu Lys Val Ala Gly Gly Ala
79 35          40          45
80 Ser Met Val Pro Ser Glu Thr Asn Pro Phe Gln Asp Asn Asn Ser His
81 50          55          60
82 Gly Thr His Val Ala Gly Thr Val Ala Ala Leu Asn Asn Ser Ile Gly
83 65          70          75          80
84 Val Leu Gly Val Ala Pro Ser Ala Ser Leu Tyr Ala Val Lys Val Leu
85 85          90          95
86 Gly Ala Asp Gly Ser Gly Gln Tyr Ser Trp Ile Ile Asn Gly Ile Glu
87 100         105         110
88 Trp Ala Ile Ala Asn Asn Met Asp Val Ile Asn Met Ser Leu Gly Gly
89 115         120         125
90 Pro Ser Gly Ser Ala Ala Leu Lys Ala Ala Val Asp Lys Ala Val Ala
91 130         135         140
92 Ser Gly Val Val Val Val Ala Ala Ala Gly Asn Glu Gly Thr Ser Gly
93 145         150         155         160
94 Ser Ser Ser Thr Val Gly Tyr Pro Gly Lys Tyr Pro Ser Val Ile Ala
95 165         170         175
96 Val Gly Ala Val Asp Ser Ser Asn Gln Arg Ala Ser Phe Ser Ser Val
97 180         185         190
98 Gly Pro Glu Leu Asp Val Met Ala Pro Gly Val Ser Ile Gln Ser Thr
99 195         200         205
100 Leu Pro Gly Asn Lys Tyr Gly Ala Tyr Asn Gly Thr Ser Met Ala Ser
101 210         215         220
102 Pro His Val Ala Gly Ala Ala Ala Leu Ile Leu Ser Lys His Pro Asn
103 225         230         235         240
104 Trp Thr Asn Thr Gln Val Arg Ser Ser Leu Glu Asn Thr Thr Thr Lys

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109					245					250						255
110	Leu	Gly	Asp	Ser	Phe	Tyr	Tyr	Gly	Lys	Gly	Leu	Ile	Asn	Val	Gln	Ala
111				260					265						270	
112	Ala	Ala	Gln													
113				275												

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/075,907

DATE: 03/04/2002

TIME: 14:51:06

Input Set : A:\7039sl.txt

Output Set: N:\CRF3\03042002\J075907.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application Number

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date